



Pupils with Physical Disabilities

Rheumatoid Polyarthritis



Rheumatoid Polyarthritis



Classroom-based tips (focus on instructional methods)

1. **Inform the class about the presence of a pupil with rheumatoid polyarthritis through age appropriate means** such as a project, discussion, parental participation, storytelling or the involvement of the child himself/herself.
2. **Provide activities promoting acceptance and support in order to avoid marginalisation.** “Changes in attitudes are possible, provided that traditional teaching methods and materials are enriched with alternative materials that represent typically underrepresented groups of people, and also that the teaching methods adopted encourage active involvement and critical thinking among students.” (<http://www.tandfonline.com/doi/full/10.1080/13603116.2012.717638>)
3. **Ensure that each pupil has a role in class activities.**
4. **Use various teaching methods** in order to offer equal learning opportunities to those with rheumatoid polyarthritis.
5. **Provide a specific set of teaching materials** for example in digital form so that pupils with rheumatoid polyarthritis do not have to carry heavy books in and out of school.
6. **Provide copies of teachers’ notes or recorded lectures**, as well as digital notes for pupils using technology.
7. **Be understanding with such issues as lateness, absences, shortened school days, fatigue, change in mood, and missed homework due to physical therapy sessions.**
8. **Provide options for tutoring or extra time to make up assignments and complete tasks.**
9. **Differentiate testing and assessment by providing options on a case by case basis**, for example extra time or untimed tests, one-on-one evaluation, alternate response mode, use of a laptop and/or other assistive technology.
10. **Provide options for adapted physical activities after consulting with the pupil’s physiotherapist.**
11. **Make arrangements for sitting and positioning in class to facilitate moving around and participation in activities safely.** Consult physiotherapist for specific recommendations.
12. **Employ accessibility features and/or available assistive technology to facilitate learning.**



School-based practical tips (focus on instructional methods)

Class Divisions / Arrangements

Discuss physical therapy programmes with the parents that can be mediated by the school, monitored and improved to best suit the needs of each pupil. Consult with the family and the pupil's physiotherapist regarding sitting, position and mobility of the pupil in the school environment.

(<http://www.webmd.com/pain-management/tc/physical-therapy-topic-overview>)

Community

1. **Arrange meetings between the parents and the staff** (including other professionals working with the pupils such as the physiotherapist) so as to learn as much as possible about the diagnosis, their observations about the pupil's current level of ability and possible needs during the course of the school year. Design a school project in order to increase the level of awareness of the teachers, pupils and parents of what rheumatoid polyarthritis means.
2. **Find and have available contact details of local/national associations for rheumatoid (poly)arthritis for further information and support.**

Curricular Adaptations

1. **Allow pupils with rheumatoid polyarthritis to use assistive technological devices that help them perform the tasks and improve performance**, such as a keyboard for writing. Such interventions may even improve the pupil's physical abilities.
2. **Make the physical education class and sports activities in school accessible by adjustment of playing areas** (dimension, surface); equipment modification (lighter balls, balls with sounds), modification of net height.

[Reference: Cristea, Ştef, Dragoş, 2014
http://www.fefsoradea.ro/PDF/curs/Dragos/Activitati%20motrice%20adaptate_curs.pdf]

Discipline

Monitor safety of the pupils during their curricular and extra-curricular activities during their classes, breaks or other types of activities.

Educational Visits / Field Trips / School Exchanges / Trips Abroad

Adapt or differentiate learning tasks and other extra-curricular activities **including homework, educational activities and sports competitions in order to diminish exclusion due to rheumatoid polyarthritis.**

Food: Canteen / Visits / Camps / Trips

Contact family and dietary consultants for pupils with rheumatoid polyarthritis; nutrition is important in the evolution of the condition. (<http://www.webmd.com/rheumatoid-arthritis/biologics-15/rheumatoid-arthritis-diet>. [Reference: <http://www.webmd.com/pain-management/ss/slideshow-foods-fight-pain>]

Homework

Adapt or differentiate learning tasks and other extra-curricular activities **including homework, educational activities and sports competitions in order to diminish exclusion due to rheumatoid polyarthritis.**

Other (Medical Care)

Provide medical attention at school whenever pains are growing or the pupil complains of other new symptoms such as eye disease, fatigue, and stiffness. [Reference: <http://www.webmd.com/rheumatoid-arthritis/tc/juvenile-idiopathic-arthritis-inflammatory-eye-disease-credits>]

Parents / Parents' Associations

1. **Arrange meetings between the parents and the staff** (including other professionals working with the pupils such as the physiotherapist) so as to learn as much as possible about the diagnosis, their observations about the pupil's current level of ability and possible needs during the course of the school year. Design a school project in order to increase the level of awareness of the teachers, pupils and parents of what rheumatoid polyarthritis means.
2. **Facilitate family support and confidence in parenting a child with rheumatoid polyarthritis.**
3. Discuss physical therapy programmes with the parents that can be mediated by the school, monitored and improved to best suit the needs of each pupil. Consult with the family and the pupil's physiotherapist regarding sitting, position and mobility of the pupil in the school environment. [Reference: <http://www.webmd.com/pain-management/tc/physical-therapy-topic-overview>]
4. **Contact family and dietary consultants for pupils with rheumatoid polyarthritis;** nutrition is important in the evolution of the condition. (<http://www.webmd.com/rheumatoid-arthritis/biologics-15/rheumatoid-arthritis-diet>. [Reference: <http://www.webmd.com/pain-management/ss/slideshow-foods-fight-pain>]

Safety

1. **Discuss physical therapy programmes with the parents that can be mediated by the school, monitored and improved to best suit the needs of each pupil.** Consult with the family and the pupil's physiotherapist regarding sitting, position and mobility of the pupil in the school environment. [Reference:

<http://www.webmd.com/pain-management/tc/physical-therapy-topic-overview>]

2. **Provide access and facilities in order to develop inclusive school projects, events and celebrations for all pupils**, providing facilities for those with rheumatoid polyarthritis to be able to participate, including safety conditions, hall accommodation and traffic in the corridors.
3. **Provide medical attention at school whenever pains are growing or the pupil complains of other new symptoms** such as eye disease, fatigue, and stiffness. [Reference: <http://www.webmd.com/rheumatoid-arthritis/tc/juvenile-idiopathic-arthritis-inflammatory-eye-disease-credits>; <http://www.webmd.com/rheumatoid-arthritis/features/growing-pains-or-childhood-arthritis>]
4. Monitor safety of the pupils during their curricular and extra-curricular activities **during their classes, breaks or other types of activities**.
5. **Make sure that, in case of emergency, the evacuation plan allows pupils with rheumatoid polyarthritis to safely get out of the building**.
6. **Make the physical education class and sports activities in school accessible by adjustment of playing areas** (dimension, surface); equipment modification (lighter balls, balls with sounds), modification of net height. [Reference: Cristea, Ștef, Dragoș, 2014 http://www.fefsoradea.ro/PDF/curs/Dragos/Activitati%20motrice%20adaptate_curs.pdf]

School Breaks

Monitor safety of the pupils during their curricular and extra-curricular activities **during their classes, breaks or other types of activities**.

School Celebrations

Provide access and facilities in order to develop inclusive school projects, events and celebrations for all pupils, providing facilities for those with rheumatoid polyarthritis to be able to participate, including safety conditions, hall accommodation and traffic in the corridors.

School Purchases

1. **Equip the building of the school institution with accessibility and safety adaptations** such as elevator, ramps, and special desks.
2. **Allow pupils with rheumatoid polyarthritis to use assistive technological devices that help them perform the tasks and improve performance**, such as a keyboard for writing. Such interventions may even improve the pupil's physical abilities.

Pupil Support

1. **Arrange meetings between the parents and the staff** (including other professionals working with the pupils such as the physiotherapist) so as to learn as much as possible about the diagnosis, their observations about the pupil's current level of ability and possible needs during the course of the school year. Design a school project in order to increase the level of awareness of the teachers, pupils and parents of what rheumatoid polyarthritis means.
2. **Provide pupils extra support if possible**, whether financial or individual teaching support to help in improving their learning ability, scheduling extra instruction time and providing a supportive relationship. Consider that rheumatoid (poly)arthritis may be a progressive condition and be prepared for continuous adaptations and changes.
3. **Find and have available contact details of local/national associations for rheumatoid (poly)arthritis for further information and support.**

Teacher Professional Development

Provide training for teachers that have pupils with rheumatoid polyarthritis in their classes.

Technology

1. **Allow pupils with rheumatoid polyarthritis to use assistive technological devices that help them perform the tasks and improve performance**, such as a keyboard for writing. Such interventions may even improve the pupil's physical abilities.
2. **Make arrangements for assistive technology assessment and provision.**
3. **Provide copies of teachers' notes or recorded lectures**, as well as digital notes for pupils using technology.

Supportive Literature

Definition: Juvenile idiopathic arthritis (JIA), previously known as juvenile chronic arthritis or juvenile rheumatoid arthritis is a chronic disease of childhood with a spectrum of joint involvement and associated systemic involvement. The cause of JIA is poorly understood, and there is currently no cure the disease. (<https://www.ncbi.nlm.nih.gov/pubmed/23595241>)

Juvenile rheumatoid arthritis is a type of arthritis that causes joint inflammation and stiffness for more than six weeks in a child aged 16 or younger.

Inflammation causes redness, swelling, warmth, and soreness in the joints, although many children with JRA do not complain of joint pain. Any joint can be affected, and inflammation may limit the mobility of affected joints.

JRA is an autoimmune disorder, which means that the body mistakenly identifies some of its own cells and tissues as foreign. The immune system, which normally helps to fight off harmful, foreign

substances such as bacteria or viruses, begins to attack healthy cells and tissues. The result is inflammation -- marked by redness, heat, pain, and swelling.

Types of Juvenile Rheumatoid Arthritis

Pauciarticular: (paw-see-are-tick-you-lar) means that four or fewer joints are involved. This is the most common form of JRA; about half of all children with JRA have this type. It typically affects large joints, such as the knees. Eye disease affects from 20% to 30% of children with pauciarticular. Regular preventive exams by an ophthalmologist are necessary to treat serious eye problems. Many children with pauciarticular disease outgrow arthritis by adulthood.

Polyarticular: About 30% of all children with JRA have polyarticular disease, in which five or more joints are affected. The small joints, such as those in the hands and feet, are most commonly involved, but the disease may also affect large joints. Polyarticular JRA often is symmetrical - it affects the same joints on both sides of the body. Some children with polyarticular disease have a special kind of antibody in their blood called rheumatoid factor. These children often have a more severe form of the disease, which doctors consider to be similar to adult rheumatoid arthritis.

Systemic: Along with joint swelling, the systemic form of JRA is characterised by fever and a light pink rash, and may also affect internal organs such as the heart, liver, spleen, and lymph nodes. The systemic form, sometimes called Still's disease, affects 20% of children with JRA. Almost all children with this type of JRA test negative for both rheumatoid factor and ANA. A small percentage of these children develop arthritis in many joints and can have severe arthritis that continues into adulthood.

Websites and EU Reports

EU Accessibility Act -
[http://www.europarl.europa.eu/RegData/etudes/IDAN/2016/571382/IPOL_IDA\(2016\)571382_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/IDAN/2016/571382/IPOL_IDA(2016)571382_EN.pdf)

European Accessibility Act 2015 <http://ec.europa.eu/social/main.jsp?catId=1202>
<https://www.ncbi.nlm.nih.gov/pubmed/23595241>

Journal of medical Case Reports
http://www.medscape.com/viewarticle/807803_2
<https://jmedicalcasereports.biomedcentral.com/articles/10.1186/1752-1947-7-166>

<http://www.sciencedirect.com/science/article/pii/S2255502114001369>

<http://www.rheumatology.org/I-Am-A/Patient-Caregiver/Diseases-Conditions/Juvenile-Arthritis>

Arthritis Statistics 2017 – Trends, Analysis and Statistics
<http://www.reportlinker.com/report-summary/Chronic-Disease/74545/European-Arthritis-Industry.html>

Asociatia Pacientilor cu Afectiuni Autoimune (APAA)/ Association of Patients with Autoimmune Related Diseases <http://www.apaa.ro/>

Pediatric Rheumatology International Trails Organisation PRINTO <http://www.printo.it>

References

Brewer EJ Jr, Bass J, Baum J, Cassidy JT, Fink C, Jacobs J, Hanson V, Levinson JE, Schaller J, Stillman JS: Current proposed revision of JRA criteria. *Arthritis Rheum* 1977, 20(Suppl 2):195–199.

Petty RE, Southwood TR, Baum J, Bhattay E, Glass DN, Manners P, Maldonado-Cocco J, Suarez-Almazor M, Orozco-Alcala J, Prieur AM: Revision of the proposed classification criteria for juvenile idiopathic arthritis: Durban, 1997. *J Rheumatol* 1998, 25:1991–1994.

Butbul YA, Tyrrell PN, Schneider R, Dhillon S, Feldman BM, Laxer RM, Saurenmann RK, Spiegel L, Cameron B, Tse SM, Silverman ED: Comparison of patients with juvenile psoriatic arthritis and nonpsoriatic juvenile idiopathic arthritis: how different are they? *J Rheumatol* 2009, 36:2033–2041.

Dell'Era L, Facchini R, Corona F: Knee synovectomy in children with juvenile idiopathic arthritis. *J Pediatr Orthop B* 2008, 17:128–130.

Ravelli A, Felici E, Magni-Manzoni S, Pistorio A, Novarini C, Bozzola E, Viola S, Martini A: Patients with antinuclear antibody-positive juvenile idiopathic arthritis constitute a homogeneous subgroup irrespective of the course of joint disease. *Arthritis Rheum* 2005, 52:826–832.

Wynne-Roberts CR, Cassidy JT: Juvenile rheumatoid arthritis with rice bodies: light and electron microscopic studies. *Ann Rheum Dis* 1979, 38:8–13.

Chung C, Coley BD, Martin LC: Rice bodies in juvenile rheumatoid arthritis. *AJR Am J Roentgenol* 1998, 170:698–700.

Adamec O, Dungal P, Kasal T, Chomiak J: Knee joint synovectomy in treatment of juvenile idiopathic arthritis. *Acta Chir Orthop Traumatol Cech* 2002, 69:350–356.

Toledo MM, Martini G, Gigante C, Da Dalt L, Tregnaghi A, Zulian F: Is there a role for arthroscopic synovectomy in oligoarticular juvenile idiopathic arthritis? *J Rheumatol* 2006, 33:1868–1872.